

REMARKS

The Official Action mailed May 23, 2003, has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to September 23, 2003. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statement filed on November 22, 2000.

Claims 1, 3, 4, 7, 8 and 10-100 were pending in the present application prior to the above amendment. It is noted that claims 2, 5, 6 and 9 were canceled in the Amendment filed March 24, 2003. Claims 1, 10, 14, 15, 18, 19, 23, 24, 27, 28, 32, 33, 36, 37, 41, 42, 45, 46, 50, 51, 54, 55, 59, 60, 63, 64, 68, 69, 72 and 73 have been canceled, independent claims 3, 4, 7, 8, 77-79 and 97-100 have been amended to better recite the features of the present invention, and new claims 101-122 have been added to recite additional protection to which the Applicants are entitled. Claims 11-13, 16, 17, 20-22, 25, 26, 29-31, 34, 45, 38-40, 43, 44, 47-49, 52, 53, 56-58, 61, 62, 65-67, 70, 71, 74-76, 85-87 and 94-96 have been withdrawn from consideration. Accordingly, claims 3, 4, 7, 8, 11-13, 16, 17, 20-22, 25, 26, 29-31, 34, 35, 38-40, 43, 44, 47-49, 52, 53, 56-58, 61, 62, 65-67, 70, 71, 74-122 are elected, of which claims 3, 4, 7, 8, 77-79 and 97-100 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

In response to a request in paragraph 2 of the Official Action, the Applicants will correct any errors in the specification of which the Applicants become aware.

Paragraphs 3 and 5 of the Official Action asserts that claim 3 is a substantial duplicate of claims 4 and 7 and that claim 97 is a substantial duplicate of claims 98 and 99. The Applicants respectfully disagree. Claim 3 recites that the microlens array is provided in the second substrate at a side opposite to the first substrate while claim 4 recites that the microlens array is provided on a surface of the second substrate, the

surface being opposite to a surface that faces the first substrate. Since claim 3 does not require that the microlens array be provided on a surface of the second substrate, the scope of claim 3 is substantially different from that of claim 4. Also, claim 7 recites a plurality of thin film transistors while claims 3 and 4 do not. Similar arguments are applicable to claims 97-99. Therefore, the Applicants respectfully submit that claim 3 is not a duplicate of either claim 4 or 7, and that claim 97 is not a duplicate of either claim 98 or 99. Reconsideration is requested.

Paragraph 4 of the Official Action asserts that claim 78 is a duplicate of claim 79. In response, claim 78 has been amended to recite "wherein said plurality of gap holding members are formed by etching an insulating film," and claim 79 has been amended to recite that "said thin film transistor comprising a crystalline semiconductor film including a channel region therein." The Applicants respectfully submit that claim 78, as amended, is not a duplicate of claim 79, as amended.

Paragraph 7 of the Official Action rejects claims 3, 4, 7, 8, 77-84, 88-90, 91-93 and 97-100 as obvious based on the combination of U.S. Patent No. 6,195,143 to Ogawa and U.S. Patent No. 5,982,471 to Hirakata et al. The Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present invention, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Ogawa and Hirakata do not teach or suggest that gap holding members are formed by etching an insulating film.

The present invention is directed to a liquid crystal panel or a projector using a liquid crystal panel. For example, the liquid crystal panel recited in claim 3 comprises first and second substrates, a liquid crystal, a plurality of gap holding members and a microlens array wherein the first substrate faces the second substrate through the liquid crystal and the plurality of gap holding members and wherein the microlens array is provided on a surface of the second substrate, the surface being opposite to a surface that faces the first substrate. The microlens array is generally described in page 4 of the specification.

The present invention resides in the combination of the microlens array and the gap holding members. The gap holding members of the present invention are formed by etching an insulating film over the substrate so that they are formed on selected portions of the substrate such that they do not block the light used for displaying an image. In accordance with the preferred embodiments, the gap holding members are located at a portion distant from the optical axis of the microlens, typically, over the contact holes where the pixel electrodes are connected with wirings. Thus, the light source can be more effectively utilized and the brightness of the display can be increased. Please see Figs. 26 and 27 and the associated descriptions in the specification.

Referring to the pending rejection, the Official Action asserts that Ogawa shows the basic configuration of the claimed invention except the claimed gap holding members (page 4, Paper No. 6). The Official Action relies on Hirakata to allegedly cure this deficiency and asserts that the conducting spacers 401/402 of Hirakata are the same as the gap-holding members of the present invention (page 5, Id.). That is, the Official Action asserts that it would have been obvious to incorporate the conducting spacers of Hirakata into the device of Ogawa (Id.). The Applicants disagree with the assertion that the conducting spacers 401/402 of Hirakata are the same as the gap-holding members of the present invention. In order to clarify this point, the Applicants have amended the independent claims to recite that the gap holding members are formed by etching an insulating film. Unlike the gap holding members of the present invention, the conducting spacers 401/402 of Hirakata are either added to a sealing material and applied to regions 254a-254d (column 11, lines 10-15), or merely dispersed over the substrate (column 11, lines 23-37). Hirakata does not teach or suggest that the conducting spacers 401/402 of Hirakata are formed by etching an insulating film. The Applicants respectfully submit that the gap holding members recited in the amended claims are distinguished from the conducting spacers taught by Hirakata.


Since Ogawa and Hirakata do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 8 of the Official Action rejects claims 82-84, 88-90 and 91-93 as obvious based on the combination of Ogawa, Hirakata and U.S. Patent No. 5,739,882 to Shimizu et al. Shimizu does not cure the deficiencies in Ogawa and Hirakata. The Official Action relies on Shimizu to allegedly teach that an LCD polymerized spacer has a column shape and is made from UV curable epoxy resin (page 6, Paper No. 6.). Ogawa, Hirakata and Shimizu, either alone or in combination, do not teach or suggest

that gap holding members are formed by etching an insulating film. Since Ogawa, Hirakata and Shimizu do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



Eric J. Robinson
Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C.
PMB 955
21010 Southbank Street
Potomac Falls, Virginia 20165
(571) 434-6789